IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor : Romualdo T. Impas	
Appln. No.: 09/520,389	
Filed : March 8, 2000	Group Art Unit: 2174
For : SYSTEM AND METHOD FOR IMPLEMENTING AN IMAGE ANCILLARY TO A CURSOR	Examiner: M. TRAN
Docket No.: M61.12-0177	

RESPONSE

BOX Non-Fee Amendment
Assistant Commissioner for Patents
Washington, D.C. 20231

I HEREBY CERTIFY THAT THIS PAPER IS BEING SENT BY U.S. MAIL, FIRST CLASS, TO THE ASSISTANT COMMISSIONER FOR PATENTS, WASHINGTON, D.C. 20231, THIS

27th DAY OF May , 20 03

Sir:

This is in response to the Final Office Action mailed on February 26, 2003.

REMARKS

In the Office Action, claims 1, 3-23, 26, 29, 31-53 and 56 were pending and under consideration. The Examiner rejected all claims.

On page 2 of the Office Action, the Examiner rejected claims 1, 21-23, 26, 29, 31-53 and 56 under 35 U.S.C. §102(b) as being anticipated by Martin et al. U.S. Patent No. 5,665,066 (Martin et al.). Applicant respectfully traverses the Examiner's rejection.

In order to reject a claim under 35 U.S.C. §102(b), the Examiner must find every limitation of the claim in the cited reference. Of the claims rejected as being anticipated by Martin et al., claims 1, 23, 26, 29, 48, 51, 53 and 56 are independent claims. The limitations of these claims are simply not found in Martin et al.

There is no question that Martin et al. does show that a cursor is displayed on a display screen along with a shadow. To the extent the Examiner has asserted this, Applicant is in agreement. However, there is simply no indication, whatsoever, of how Martin et al. creates and displays the cursor and shadow image. The only recitation in Martin et al. which Applicant has found, and which is directed to how a shadow image is created is found at column 6, lines 37-38. There, Martin et al. states "Conventional techniques exist for displaying a shadow which corresponds to a displayed object." This appears to be the only teaching in the entire document of how a shadow image is created. There is no indication as to whether the shadow image is created separately from the cursor image, nor is there any indication that the shadow image is even created from the cursor image or whether it is created anew.

By contrast, independent claims 1 and 29 both specifically state that a cursor image is obtained and an ancillary image is obtained and then a composite indication is formed "indicative of a composite image containing both the cursor image and the ancillary image…" and then "the composite image" is displayed. There is simply no indication, whatever, in Martin et al., that this is how the shadows are created and displayed. Thus, Applicant submits that independent claims 1 and 29 cannot be anticipated by Martin et al.

Similarly, Martin et al. cannot anticipate independent claims 23 and 26. Both of those claims specifically state that the ancillary image is based on at least one characteristic of the cursor image, and wherein the ancillary image is displayed "as an image formed by light impinging on a surface after passing through the cursor image." As one example to illustrate this claim, the specification of the present Application states that the ancillary image could represent, for example, light after it has passed through a transparent liquid medium, such as water.

Of course, this is but one exemplary embodiment covered by the claims.

To meet this limitation, the Examiner pointed to shadow 620 in FIG. 6A. The shadow 620 is being cast in FIG. 6A by a pencil. Light does not pass through a pencil. Nor is there any teaching or discussion, whatever, that shadow 620 is displayed to look like light impinging on the work surface after it has passed through the pencil. In fact, pencil 616 is not taught, or discussed, or illustrated by stippling in the figure, as being an item through which light can pass. Therefore, Martin et al. simply cannot anticipate independent claims 23 and 26 which state that the ancillary image is displayed "as an image formed by light impinging on a surface after passing through the cursor image."

Claims 53 and 56 both specifically state that the shadow and the cursor "are formed integrally with one another" (claim 53) or displayed "as a single image" (claim 56). This is neither taught nor suggested anywhere by Martin et al. As stated above with respect to independent claims 1 and 29, Martin et al. does not teach any method, whatsoever, of how the images are created, such as whether they are formed as a single image and displayed as a single image, or whether they are formed as multiple images and displayed that way.

The portion of Martin et al. which the Examiner cited as meeting this limitation (column 8, lines 15-25) actually teaches that the shadow is removed from a selected tool representation when the signal generation device 862 has been activated. Of course, this simply does not teach or suggest that the shadow and cursor are "formed integrally with one another" or that they are displayed as a "single image". Thus, Martin et al. cannot anticipate independent claims 53 or 56.

The Examiner also rejected claims 48 and 51 under 35 U.S.C. §102(b), but made no specific reasoned rejection of the

claims. Therefore, Applicant assumes the rejection of those claims under §102(b) was an error. In any case, there is no indication in Martin et al. of displaying a cursor as an AGRB alpha blended image.

Applicant thus respectfully submits that independent claims 1, 23, 26, 29, 48, 51, 53 and 56 are allowable over Martin et al. Therefore, dependent claims 3-22, 31-47, 49-50 and 52 are allowable as well.

On pages 4-8 of the Office Action, the Examiner indicated that claims 3-20 and 31-52 were rejected under 35 U.S.C. §103(a) as being unpatentable over Martin et al. in view of Dawson et al. U.S. Patent No. 5,270,688 (Dawson et al.) Applicant respectfully traverses the Examiner's rejection.

Dawson et al. has nothing to do with creating an ancillary image (ancillary to a cursor) or a shadow, of any kind. Dawson et al. only teaches generating a cursor image. Specifically, Dawson et al. teaches that a system should provide a large contrast between a background and a cursor (or overlay). Dawson et al. states that prior systems simply inverted the gray code indication of the background color in order to generate the cursor image. That system works well where the cursor and background are simply in black and white. However, if the colors can reside in a middle shade of the gray scale, then the simple gray scale inversion does not work. For example, if the background color is represented by the gray scale value (0111 1111) an inversion of that results in the gray scale value (1000 0000) which would barely be discernable from the first color.

In order to address this problem, Dawson et al. compares the pixel color value for the background to a threshold. If the background color for the chosen pixel is greater than the threshold, then the color for the cursor value is set to a minimum value. If the background color for the chosen pixel is less than the threshold, then the color value for the cursor is

set to a maximum value. This guarantees that the color of the cursor will be at least one half of the total scale of shades away from the background color. Of course, this has nothing whatever to do with generating an ancillary image or shadow.

By contrast, claims 4-20 and 32-47 specifically address how the ancillary image is created and displayed. Therefore, Dawson et al. cannot render these claims obvious.

Similarly, independent claims 48 and 51 are allowable over the references cited by the Examiner. Both claims 48 and 51 require a cursor displayed as "an alpha blended AGRB image". The portion of Dawson et al. cited by the Examiner to meet this limitation (column 6, lines 50-65) neither teaches nor suggests this limitation. That portion of the document simply states that each pixel is represented in the frame buffer by 24 bits, 8 bits each for the colors red, green and blue. Dawson et al. states that the process of determining the cursor color (to be half of the total scale of shades away from the background color) is simply repeated for each of the colors red, green and blue which define the selected pixel color. Of course, again, this has nothing to do with displaying a cursor as an alpha blended AGRB image or creating any type of ancillary image or shadow. Applicant therefore respectfully submits that independent claims 48 and 51 are allowable.

In conclusion, Applicant submits that independent claims 1, 23, 26, 29, 48, 51, 53 and 56 are allowable over the references cited by the Examiner. Applicant further submits that dependent claims 3-22, 31-47, 49-50 and 52 are allowable both independently and by virtue of their dependence on allowable independent claims. Reconsideration and allowance of claims 1, 3-23, 26, 29, 31-53 and 56 are respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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